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Dated: July 7, 2008

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**PATENTS**

Attorney Docket No. DPL-031

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT:	Shu et al.	GROUP ART UNIT:	2617
SERIAL NO.:	10/790,584	CONFIRMATION NO.:	9861
FILING DATE:	March 1, 2004	EXAMINER:	Ho, Huy C.
TITLE:	MANET Routing Based on Best Estimate of Expected Position		

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY BRIEF**

This reply brief is submitted pursuant to 37 C.F.R. §41.41 in reply to the Examiner's Answer of May 13, 2008 ("Answer") and to address the Examiner's contentions in Section 10, "Response to Argument," of the Answer. In particular, this brief addresses the Examiner's assertions that periodically updating information regarding the location of nodes in a network is equivalent to selecting a node for transmission of a message based on a predicted future location of a destination node.<sup>1</sup>

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<sup>1</sup> Answer at pg. 11.

**Argument***Current Information is not Predicted Future Information*

In the Answer, the Examiner maintains his reliance on Ahmed without addressing our argument, presented in our primary brief and throughout prosecution, that current information is not future information. Indeed, the Examiner seems to acknowledge that Ahmed is limited to the former despite our claims' call for the latter. As a result, the Examiner's reasoning undermines his own rejection based on the Ahmed reference.

Specifically, the Examiner cites the Ahmed reference as disclosing "a location-based or position-based routing method" in which "each node in the network maintains location [a] list of other nodes in its neighborhood" and that this "location list includes information regarding location information of nodes" which is "updated periodically thus a node is always guaranteed of current information of its neighboring nodes."<sup>2</sup> The Examiner's characterization of the Ahmed reference is indeed accurate — so accurate, in fact, that the distinction between Ahmed and the present claims could not be more clear. Simply put, periodically updating current location information is not the same as making routing decisions based on predicted locations.

Indeed, by stating that "location information is updated periodically at faster or slower rates depending on the mobility of nodes" and equating this to predicting the future location of node, the Examiner actually concedes the limitations of the Ahmed system. Rather than predict the future location of a node, Ahmed refreshes the current locations of nodes at a rate that depends on node mobility. Ahmed's location information, in other words, always specifies the past, not the future. If his refresh rate is high, then the location tables reflect the recent past rather than the distant past. But it is still the past, and, hence, the locations are liable to be inaccurate. It is precisely this inaccuracy that the subject matter of the present claims overcomes. Whereas Ahmed's system bases routing decisions on where a node was or may still be, it cannot base decisions on where a node will be.

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<sup>2</sup> Answer at pg. 10.

Ahmed does contemplate the possibility that the location of a destination node may not be known. But instead of basing routing decisions based on a predicted location of the node, as required by the present claims, Ahmed proposes either dropping packets (clearly a less-than-ideal solution) or using a so-called “lazy-update” method in which node positions are time-stamped and replaced with more recent information when available. Once again, Ahmed relies on the past — i.e., on actual, known location information. The Examiner’s attempt to equate the past with the future is not only logically untenable, but ignores both the operation and the advantages of the subject matter claimed herein.

### **Conclusion**

In view of the discussion above, Appellant respectfully submits that claims 1-26 are patentable in view of the cited reference, and solicits reversal of the Examiner’s rejections.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 07-1700.

Respectfully submitted,

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